IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently amended) A method comprising:

forming a layer of high-K dielectric material on a layer of substrate material;

forming at least a first gate and a second gate on the layer of high-K dielectric material, leaving an exposed portion of the high-K material between the first and second gates;

exposing the exposed portion of the layer of high-K dielectric material to hydrogen to reduce the exposed portion to form a metallic portion from the exposed portion;

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion to form a trench;

forming spacers adjacent to the first gate and the second gate; and

~~The method of claim 1~~ wherein forming the spacers comprises forming the spacers adjacent the gates after removing the metallic portion from the layer of high-K material.

3. (Original) The method of claim 2 wherein at least one spacer extends from substantially a top surface of one of the first and second gates into the trench to a bottom surface of the trench.

4. (Currently amended) The method of claim [[1]] 2 wherein forming the spacers comprises forming the spacers before exposing the exposed portion of the layer of high-K dielectric material to hydrogen.

5. (Original) The method of claim 4 wherein the spacers extend from substantially the top surface of the gates to which that spacer is adjacent to a top surface of the layer of high-K dielectric material.

6. (Currently amended) The method of claim [[1]] 2 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

7. (Currently amended) The method of claim [[1]] 2 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.

8. (Currently amended) The method of claim [[1]] 2 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen in a plasma chamber.

9. (Original) The method of claim 8 wherein the layer of high-K dielectric material is disposed in the plasma chamber at a distance from a plate ranging from about 5 mm to about 10 mm.

10. (Original) The method of claim 8 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen at a flow rate that ranges from about 1000 SCCM to about 2000 SCCM.

11. (Currently amended) A method comprising:

forming a layer of high-K dielectric material on a substrate;

forming at least a first gate and a second gate on the layer of high-K dielectric material, leaving an exposed portion of the high-K material between the first and second gates;

exposing the [[an]] exposed portion of the layer of high-K dielectric material to hydrogen to reduce the exposed portion of the layer of high-K dielectric material to form a metallic portion from the exposed portion; ~~and~~

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion to form a trench between the first gate and the second gate, while leaving discrete portions of the high-K material on sides of the first and second gates opposite the trench;

forming a first spacer on a side of the first gate adjacent the trench, the first spacer extending from substantially a top surface of the gate into the trench to a bottom surface of the trench; and

forming a second spacer on a side of the first gate opposite the trench, the second spacer extending from substantially the top surface of the gate to the discrete portion of the high-K material.

12. (Original) The method of claim 11 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

13. (Original) The method of claim 11 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.

14. (Original) The method of claim 11 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen in a plasma chamber.

15. (Original) The method of claim 14 wherein the layer of high-K dielectric material is disposed in the plasma chamber at a distance from a plate ranging from about 5 mm to about 10 mm.

16. (Original) The method of claim 14 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of

the layer of high-K dielectric material to hydrogen at a flow rate that ranges from about 1000 SCCM to about 2000 SCCM.

17. (Original) The method of claim 11 wherein the wet chemical etchant comprises a sulfuric acid and hydrogen peroxide based etch chemistry.

18. (Original) The method of claim 17 wherein the etch chemistry is a piranha etch chemistry.

19. (Original) The method of claim 11 wherein the wet chemical etchant comprises a hydrochloric acid and hydrogen peroxide based etch chemistry.

20. (Original) The method of claim 19 wherein the etch chemistry is an SC2 etch chemistry.

21. (Currently amended) A method ~~to form a trench having substantially zero etch bias through a thin film of high-K dielectric material~~ comprising:

forming a layer of high-K dielectric material on a layer of substrate material;

forming at least a first gate and a second gate on the layer of high-K dielectric material, leaving an exposed portion of the high-K material between the first and second gates, wherein each of the first gate and the second gate has a bottom surface;

exposing [[an]] the exposed portion of the layer ~~film~~ of high-K dielectric material to hydrogen to reduce the exposed portion to form a metallic portion from the exposed portion; ~~and~~

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion to form a trench between the first gate and the second gate;

forming a first spacer adjacent to a first side of the first gate adjacent the trench, the first spacer extending from a position above the bottom surface of the first gate to extend into the trench to a position below the bottom surface of the first gate.

22. (Original) The method of claim 21 wherein the wet chemical etchant comprises a sulfuric acid and hydrogen peroxide based etch chemistry.

23. (Original) The method of claim 22 wherein the etch chemistry is a piranha etch chemistry.

24. (Original) The method of claim 21 wheren the wet chemical etchant comprises a hydrochloric acid and hydrogen peroxide based etch chemistry.

25. (Original) The method of claim 24 wherein the etch chemistry is an SC2 etch chemistry.

26. (Original) The method of claim 21 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

27. (Original) The method of claim 21 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.

28. (New) The method of claim 21, wherein the first spacer extends to a bottom surface of the trench.

29. (New) The method of claim 21, wherein a portion of the layer of high-K material remains as a discrete portion on a second side of the first gate opposite the first side after formation of the trench between the first and second gates.

30. (New) The method of claim 29, further comprising forming a second spacer adjacent the second side of the first gate, the second spacer extending from a position above the bottom surface of the first gate to the discrete portion.

31. (New) The method of claim 21, wherein removing the metallic portion leaves an exposed portion of the substrate material at the bottom of the trench.

32. (New) The method of claim 31, wherein the first spacer extends to the substrate material.

33. (new) The method of claim 32, wherein a portion of the layer of high-K material remains as a discrete portion on a second side of the first gate opposite the first side after formation of the trench between the first and second gates and further comprising forming a second spacer adjacent the second side of the first gate, the second spacer extending from a position above the bottom surface of the first gate to the discrete portion.